

ABSTRACT OF THE DISCLOSURE

A macro pixel is provided. The macro pixel includes at least two color pixel elements. Each color pixel element includes a photoreceptor that in response to receiving light, generates an output signal that is indicative of the quantity of light photons of a color are received. Each of the color pixel elements are configured to receive a corresponding color. The photoreceptor of each color pixel element has a geometry and a responsivity to light that is a function of the geometry of the photoreceptor such that the responsivity of the output signal of the photoreceptor to the corresponding color is controllable by changing the geometry. The geometries of the photoreceptors are selected so that a predetermined relative sensitivity to each color is obtained.